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THE DARK TRIAD AND HEXACO PERSONALITY MODEL
IN RELATIONAL AGGRESSION

by

Niki Marie Knight

A Thesis
Submitted to the Graduate School
and the Department of Psychology
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Master of Arts

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ABSTRACT

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IN RELATIONAL AGGRESSION

by Niki Marie Knight

May 2016

Past research has linked relational aggression (RA) to many forms of psychological maladjustment among children and early adolescents. Although less is known about RA among emerging adults, there is a growing body of research demonstrating a number of adverse correlates. This literature has sparked an interest in examining the role of personality in RA. Most investigations to date have focused on the Five Factor Model; however, the six factor HEXACO model of personality (Ashton et al., 2004) may offer some advantages in studying RA. Moreover, the manipulative and often covert nature of RA among emerging adults has theoretical overlap with the “Dark Triad” of personality (i.e., psychopathy, narcissism, and Machiavellianism). This study explored the utility of the HEXACO model and the Dark Triad constructs in predicting proactive and reactive RA among college students. Hierarchical multiple regression was used to test the predictive utility of these constructs and assess the potential role of gender. Participants low in Honesty-Humility and Agreeableness reported utilizing more proactive and reactive RA. All three Dark Triad traits were positive predictors of reactive RA; narcissistic and psychopathic traits were positive predictors of proactive RA. Although there was some evidence that respondent gender moderated the relationships between certain independent variables and RA in regression models that included all predictive constructs, these effects were not evident when these variables were examined in isolation. The findings suggest that

the HEXACO model of personality and the Dark Triad traits have utility in understanding relational aggression among emerging adults.

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CHAPTER I

INTRODUCTION

Relational aggression (RA) is a form of aggressive behavior that involves damaging the social standing or relationships of the victim through socially manipulative avenues, using the relationship as a vehicle of harm (Crick, 1996; Crick & Grotpeter, 1995; Ellis, Crooks, & Wolfe, 2009; Werner & Crick, 1999). Examples of RA include threats to withdraw friendship, intentional ignoring, group exclusion, and rumor spreading (Fite, Stoppelbein, Greening & Preddy, 2011; Werner & Crick, 1999). Among children and early adolescents, RA has been linked to social problems, peer rejection, depression, suicidal ideation, poor academic performance, and frustration (Fite et al., 2011; Ojanen, Findley, & Fuller, 2012; Preddy & Fite, 2012). Furthermore, adolescent self-reports of relational aggression predicted delinquency and risk-taking (Spieker et al., 2011).

While much of the research on RA has been conducted with children and early adolescents, there is evidence that RA has a number of adverse correlates among older adolescents and emerging adults. Examples include anxiety, depression, self-harm, substance use, poor impulse control and anger regulation, disordered eating, maladaptive personality traits, peer rejection, and adjustment difficulties (Linder, Crick, & Collins, 2002; Miller & Lynam, 2003; Ostrov & Houston, 2008; Storch, Werner, & Storch, 2003; Werner & Crick, 1999). In a recent study by Dahlen, Czar, Prather, and Dyess (2013), general/peer RA was associated with anxiety, depression, loneliness, stress, trait anger, academic burnout, and the misuse of alcohol in a college sample. After controlling for

respondent gender, race, and relational victimization, Dahlen and colleagues found that anxiety, trait anger, and alcohol misuse predicted general/peer RA.

In addition to the two forms of aggressive behavior (i.e., overt and relational), aggression can be separated by function into proactive and reactive aggression (Burton, Hafetin, & Hanninger, 2007; Murray-Close, Ostrov, Nelson, Crick, & Coccaro, 2010; Ostrov & Houston, 2008). Proactive RA is planned and has a goal-directed end (e.g., spreading rumors to make oneself more popular). Reactive RA is impulsive and done out of anger, usually in retaliation for a perceived insult (e.g., spreading malicious rumors about a peer after having been insulted by that peer). The distinction can be useful because there is some evidence that proactive and reactive RA have different correlates. For example, Murray-Close and colleagues (2010) found that reactive RA but not proactive RA correlated with distress experienced in provocative relational contexts, hostile attributions, and abuse history. Moreover, the relationships of reactive RA to measures of anger and hostility were stronger than those for proactive RA.

In spite of the adverse interpersonal correlates of RA, it should be recognized that RA does require some level of status in one's peer group because most acts of RA require the cooperation of others. For example, a malicious rumor one starts will have little effect unless others are willing to help spread it, and one cannot effectively exclude someone from one's social circle unless the other members agree to it. Thus, RA seems to require at least some ability to be cooperative and friendly around others in order to have the support needed to engage in these behaviors. It has been suggested that RA is most likely to occur when these prosocial skills are paired with a lack of empathy in social interactions (Ojanen et al., 2012). Lack of empathy, the desire to manipulate

others, and/or the conviction that one is entitled to punish those who deviate from one's expectations may facilitate RA and can be found in certain personality constructs that may be useful predictors of RA.

Models of General Personality Structure

The Five Factor Model (FFM) of personality (Costa & McCrae, 1992; Goldberg, 1990) has been used extensively to provide a broad representation of human personality, and this has proven useful in understanding how personality is associated with overt and relational forms of aggression (Burton et al., 2007; Egan & Lewis, 2011; Hines & Saudino, 2008; Jones, Miller, & Lynam, 2011; Miller & Lynam, 2001, 2006; Miller, Zeichner, & Wilson, 2012). Using a sample of community adults, Egan and Lewis (2011) found that Neuroticism was positively related to overt affective aggression and both Agreeableness and Extraversion were inversely related to overt narcissistic aggression. They also found that some of the relationships between the FFM domains and overt aggression varied by respondent gender. Specifically, the inverse relationships of Agreeableness and Extraversion to narcissistic aggression were stronger for men than for women. Hines and Saudino (2008) found that Neuroticism was positively related to psychological aggression, a construct similar to RA, for both male and female college students but that psychological aggression was positively related to Conscientiousness and inversely related to Agreeableness among women. Miller and colleagues (2012) found that RA was inversely related to both Agreeableness and Conscientiousness and was positively related to Neuroticism among college students. Burton and colleagues (2007), also using a college sample, found that the relationships between FFM domains and RA varied by respondent gender (i.e., Agreeableness was inversely related to RA for

both men and women; Neuroticism was positively correlated with RA for men, and Conscientiousness was inversely related to RA for women).

Despite the utility of the FFM in studying RA, the 6-factor HEXACO model of personality (Ashton et al., 2004; Lee & Ashton, 2004) may have some advantages when studying psychopathic personality traits and other “dark” personality features (Gaughan, Miller, & Lynam, 2012; Lee & Ashton, 2005). The aspects of this six-factor model include Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience. The HEXACO and the FFM share three similar factors: Extraversion, Conscientiousness, and Openness; however, HEXACO Agreeableness and Emotionality are different in two important ways. First, FFM Neuroticism assesses negative affect broadly, including emotions that are typically directed internally (e.g., anxiety and depression) and those directed externally (e.g., angry hostility and impulsiveness); HEXACO Emotionality includes only the internally directed affect (Gaughan et al., 2012). Thus, Lee and Ashton (2004) described this factor as having more to do with emotionality than emotional stability (i.e., neuroticism). Second, HEXACO Emotionality includes aspects of sensitivity and sentimentality that are found in FFM Agreeableness but not Neuroticism while HEXACO Agreeableness includes the traits of tolerance and patience associated with the FFM Neuroticism factor (Lee & Ashton, 2012a). Of course, the most obvious difference between the FFM and HEXACO models is that the HEXACO includes the additional Honesty-Humility factor, described by Ashton and Lee (2007) as including traits such as fairness, sincerity, and (low) entitlement.

No studies were located directly examining the relationships among the HEXACO constructs and RA; however, there is reason to think that the HEXACO model could be useful in informing the study of RA. The HEXACO-PI-R was shown by Gaughan and colleagues (2012) to account for somewhat more variance in psychopathic personality traits than the NEO-PI-R, which was attributed primarily to the differences between HEXACO Emotionality and FFM Neuroticism. Lee and Ashton (2012) found an inverse relationship between HEXACO Agreeableness and displaced aggression and vengefulness in a college sample. In addition, the HEXACO's Honesty-Humility factor holds promise in that it is assumed to assess fairness and sincerity vs. the exploitation or manipulation of others (Ashton & Lee, 2007). Honesty-Humility was inversely related to the tendency to engage in acts of vengeance and positively related to a reluctance to exploit others in a college sample (Lee & Ashton, 2012a). Less direct evidence of the potential utility of the HEXACO model in understanding RA comes in the form of its relationships to variables such as materialism, delinquency and anti-social behavior, and risk-taking (Ashton & Lee, 2008; Dunlop, Morrison, Koenig, & Silcox, 2012; Lee & Ashton, 2012b), variables related to RA in some studies. We expect the HEXACO Honesty-Humility and Agreeableness factors to predict both proactive and reactive RA. Based on the evidence that the relationships between the FFM domains and various forms of aggression often vary by respondent gender (Burton et al., 2007; Egan & Lewis, 2011; Hines & Saudino, 2008) and the lack of research available on the HEXACO model and RA, we believe that it is important to examine potential gender interaction effects.

The Dark Triad

The Dark Triad refers to a constellation of three personality traits:

Machiavellianism, narcissism, and psychopathy. Collectively, these traits involve low empathy, a callous affect, and the tendency to want to “get ahead” more than wanting to “get along” (Jonason, Lyons, Bethell & Ross, 2013; Rauthmann & Kolar, 2013).

Individuals who have high levels of these personality traits are likely to show patterns of criminal activities (e.g., shoplifting, fraud) and engage in opportunistic sexual behaviors (e.g., mate poaching and short-term mating strategies) (Jakobwitz & Egan, 2006; Lee et al., 2013). They are self-promoting and motivated to get what they desire, regardless of necessary method or the expense of others.

The Dark Triad constructs have been compared to both the FFM and the HEXACO models of personality. Lee and Ashton (2005) found that while correlations among the Dark Triad variables were explained satisfactory by the FFM, all three were inversely related to the HEXACO Honesty-Humility factor, suggesting that the HEXACO model might have an advantage. Machiavellianism was inversely related to HEXACO Agreeableness; while Narcissism was positively related to HEXACO Extraversion. Psychopathy was inversely related to Emotionality, Conscientiousness, and Agreeableness (Lee & Ashton, 2005; Lee et al., 2013).

There is some disagreement about whether the Dark Triad traits should be regarded as a single trait or as separate constructs; however, there is some evidence that the traits are evaluated differently when examined independently. Rauthman and Klar (2012) found that narcissism was perceived as the “brightest” trait of the Dark Triad among a sample of lay people, while Machiavellianism and psychopathy were judged as

quite undesirable. Another study by Rauthman and Klar (2013) confirmed this distinction using rated perceptions of the different traits and attractiveness ratings from an adult sample. None of the traits were rated as appealing, but narcissists were judged as more appealing than psychopaths and Machiavellians, possibly because some narcissistic behaviors (e.g., charm, leadership, boldness) are viewed as desirable. Narcissists were perceived as desirable for friends and mates, while Machiavellians and psychopaths were rated as undesirable for friends and mates. Due to this, Machiavellianism and psychopathy can be considered to have more in common with one another than the narcissism aspect of the Dark Triad. These findings do show that these three traits are judged differently, and this supports viewing the three constructs as aspects of the Dark Triad. Paulhus and Williams (2002) compared the prevalence of these traits and found that they are not equivalent in normal populations. Again, this suggests that there are three separable constructs that can be meaningfully assessed.

Narcissism

Narcissism is characterized by an excessive need for admiration and feelings of grandiosity, exhibitionism, exploitation, and entitlement (Lau & Marsee, 2013; Lau, Marsee, Kunitatsu, & Fassnacht, 2011; Ojanen et al., 2012). Narcissistic individuals tend to have a strong focus on themselves, which is accompanied by a lack of empathy for others (Zondag, 2013). Furthermore, individuals who exhibit high levels of narcissism typically have the rationale that if someone does them wrong, the wrong-doer should pay a price; narcissists find it particularly intolerable if this 'repayment' does not occur. This leads to a sense of entitlement about teaching the offender a lesson (Lee & Ashton, 2005, 2012b). It is expected that this type of mind-set could lead individuals to

engage in RA following actual or perceived slights by peers. Narcissistic traits in adolescents have been found to predict overt and relational aggression (Barry, Grafeman, Adler, & Pickard, 2007; Lau & Marsee, 2013; Lau et al., 2011).

The study of narcissism is complicated by the presence of both adaptive and maladaptive (e.g., pathological) forms. Adaptive narcissism involves the traits of leadership, superiority and self-sufficiency. These traits are not considered as detrimental for an individual to possess and may even be desired. Maladaptive/pathological narcissism involves entitlement, exhibitionism and exploitativeness (Lau & Marsee, 2013) and is often associated with negative outcomes (Zeigler-Hill, Enjaian, & Essa, 2013). Lau and colleagues (2011) found that maladaptive narcissism was uniquely associated with RA among adolescents while adaptive narcissism was uniquely associated with anxiety symptoms. We expect pathological narcissism to predict both proactive and reactive RA; a measure of non-pathological narcissism will be included on an exploratory basis to more fully assess the potential role of narcissism in RA.

Machiavellianism

Machiavellianism refers to a tendency to engage in social conduct involving manipulation for personal gain and a disregard for the self-interest of others. This is done with a lack of concern for morality in interpersonal interactions (Bagozzi et al., 2013; Dussault, Hojjat, & Boone, 2013). Individuals high in Machiavellian traits (high MACHs) tend to be cynical of human nature, lack affect, and are more likely to use subtle and calculating tactics than overt aggression and find emotionally manipulative behavior as acceptable social behavior (Lau & Marsee, 2013). High MACHs also tend to be more successful at manipulating, lying, and deceiving others while also resisting the

manipulative attempts of others. This ability to manipulate the emotions of others has led to others rating high MACHs to be intelligent and charming (Lau & Marsee, 2013). This supports the hypothesis that high MACHs would be skilled at using RA and willing to utilize it for self-gain. Machiavellianism was found to predict emotional dysregulation in a sample of adolescents by Lau and Marsee (2013). High MACH's were shown to display more retaliatory aggression towards a remorseful wrongdoer than low MACH's, perhaps due to their cynical view of human nature and suspiciousness of the remorse shown by the wrongdoer (Harrel, 1980). Adolescent bullies were found to be higher in MACH traits than their non-bully peers (Sutton & Koegh, 2000), and Pursoo (2013) found that Machiavellianism predicted both proactive and reactive RA in an adolescent sample. In the present study, we expected Machiavellianism to predict proactive and reactive RA.

Psychopathy

Psychopathy is generally conceptualized as a disturbance in interpersonal and affective functioning with persistent behavioral deviance. The interpersonal problems include superficiality, manipulativeness, grandiosity and deceptiveness; the affective disturbance involves being shallow and unable to form strong emotional bonds (Drislane, Patrick, & Arsal, 2013; Hare & Neumann, 2009). Psychopathic individuals exhibit antisocial behavior, callousness, superficial charm, flat affect, irresponsibility, and a lack of remorse and guilt. Psychopathy has been linked to treatment difficulties, high rates of criminal recidivism, impulsiveness, an increased likelihood of violent offenses and risk-taking behaviors (Ansel, 2009; Hare & Neumann, 2009).

There are competing models of psychopathy, and the most widely researched model of psychopathy has two broad factors: emotional and interpersonal (e.g., superficial charm, manipulativeness, and a lack of empathy and guilt) and social deviance (i.e., antisocial behavior, poor impulse control, low frustration tolerance, and an erratic lifestyle) (Cale & Lilienfeld, 2006; Lee et al., 2013; Schmeelk et al., 2008). Using this two-factor model of psychopathic traits, Schmeelk and colleagues (2008) found that the social deviance factor but not the emotional and interpersonal factor was positively related to RA among college students. In contrast, Coyne and Thomas (2008) found that both factors predicted indirect aggression among college students. Similarly, Czar, Dahlen, Bullock, and Nicholson (2011) found that both factors predicted general/peer and romantic RA among college students while controlling for gender and overt physical aggressiveness.

The current conceptualization of psychopathy includes four factors: interpersonal, affective, lifestyle, and antisocial (Hare, 2003). Self-report measures of psychopathic personality traits that utilize this four-factor model appear to have better correspondence with the Psychopathy Checklist-Revised (PCL-R), which remains the “gold standard” for assessing psychopathy (Williams, Paulhus, & Hare, 2007). We expect psychopathy to predict both proactive and reactive RA.

The Present Study

The present study examined the utility of the broad HEXACO model of personality and the Dark Triad constructs in predicting RA in a college student sample. To facilitate comparison with other studies, the participant age range was restricted to traditional college age (i.e., 18-25). Given the lack of published data on the HEXACO

and RA, our first aim was to explore the potential relationships between the HEXACO scales and RA. Based on the literature, our predictions here were limited to honesty-humility and agreeableness; the other traits assessed in the HEXACO model were considered on an exploratory basis. In addition, we sought to determine whether the relationships between these HEXACO scales and RA varied by respondent gender.

H1: HEXACO Honesty-Humility will predict reactive RA.

H2: HEXACO Honesty-Humility will predict proactive RA.

H3: HEXACO Agreeableness will predict reactive RA.

H4: HEXACO Agreeableness will predict proactive RA.

Our second aim concerned the potential predictive utility of the Dark Triad constructs in predicting RA and sought to determine whether the predicted relationships were consistent for women and men. Gender differences have been reported on the Dark Triad constructs, with men generally scoring higher on measures of these constructs (Jonason, Li, & Cason, 2009; Jonason, Valentine, Li, & Harbeson, 2011). Moreover, some studies have found evidence that the relationships between the Dark Triad constructs and other variables differ for women and men (e.g., Jonason, Luevano, & Adams, 2012; Jonason et al., 2013), and so respondent gender was included in these analyses.

H5: Pathological narcissism will predict reactive RA.

H6: Pathological narcissism will predict proactive RA.

H7: Machiavellianism will predict reactive RA.

H8: Machiavellianism will predict proactive RA.

H9: Psychopathy will predict reactive RA.

H10: Psychopathy will predict proactive RA.

Our third aim sought to identify the optimal combination of variables for predicting RA from the following predictors: HEXACO Honesty-Humility, HEXACO Agreeableness, pathological narcissism, Machiavellianism, and psychopathy. Again, respondent gender was included in these analyses to determine whether any predictors identified interacted with gender.

H11: Reactive RA will be predicted by Honesty-Humility, Agreeableness, pathological narcissism, psychopathy, and Machiavellianism.

H12: Proactive RA will be predicted by Honesty-Humility, Agreeableness, pathological narcissism, psychopathy, and Machiavellianism.

CHAPTER II

METHOD

Participants

The sample for this study included 376 college student volunteers between the ages of 18 and 25 recruited from the University of Southern Mississippi. With regard to gender, 282 identified themselves as women (75%) and 94 as men (25%). The racial makeup of the sample included: 65% White, 32% Black, 1% Hispanic/Latino, 1% American Indian/Alaska Native, and 1% Asian. Participants were recruited and informed about the study through the web-based research system used by the Department of Psychology (Sona Systems Ltd.). Those who completed the study received course credit consistent with departmental policies.

Instruments

A brief demographic questionnaire and the following instruments were administered to the participants via the on-line Sona system. All study instruments can be found in Appendix A.

Self-Report of Aggression and Social Behavior Measure (SRASMB)

The SRASMB was developed by Morales & Crick in 1998 and was used to assess peer/general relational aggression. The full SRASMB includes 56 items and 11 subscales. Items are rated on a 7-point Likert scale from 0 (“not at all true”) to 7 (“very true”). The SRASBM scales have demonstrated adequate internal consistency ($\alpha = .69 - .76$) in college student samples and have shown evidence of construct validity from relationships with different measures of relational aggression and other related constructs (Czar et al., 2011; Linder et al., 2002). Only 11 items forming the following two scales

were used in the present study: Peer-Directed Proactive Relational Aggression (5 items $\alpha = .69$) and Peer-Directed Reactive Relational Aggression (6 items; $\alpha = .72$).

HEXACO-60

The six-factor HEXACO model of personality was assessed with the HEXACO-60 (Ashton & Lee, 2009), a 60-item short version of the HEXACO Personality Inventory-Revised (HEXACO PI-R; Ashton & Lee, 2012). The HEXACO-60 includes six 10-item scales: Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience. Response options for each item range from 1 (“strongly disagree”) to 5 (“strongly agree”). The HEXACO-60 scales have adequate internal consistency ($\alpha s = .77 - .80$) and are closely related to the full HEXACO PI-R (Gaughan et al., 2012; Lee & Ashton, 2009). The HEXACO model of personality is increasingly being recognized as a viable alternative to the more familiar FFM, a model that may have some advantages over the FFM (Ashton & Lee, 2007).

MACH-IV

Machiavellian tendencies were assessed using the 20-item MACH-IV scale (Christie & Geis, 1970). Items (e.g., “Anyone who completely trusts anyone is asking for trouble”) are scaled on a 7-point Likert scale from 1 (“strongly agree”) to 7 (“strongly disagree”). Three MACH aspects are assessed with this measure: tactics, views, and morality (Rauthmann & Will, 2011). The MACH-IV total score has demonstrated acceptable internal consistency ($\alpha s = .70 - .82$; Christy & Geis, 1970; Paulhus & Williams, 2002; Rauthmann, 2013;). A one-week test-retest reliability of .82 was reported by Kaestner, Rosen, Appel, and Sofer (1977). The MACH-IV was found to correlate with similar, well-established scales (i.e., German Machiavellianism scale, Dirty

Dozen Machiavellianism) and manipulation tactics common among Machiavellians, providing evidence of construct validity (Rauthmann, 2013). The total score from the MACH-IV was used in the present study.

Pathological Narcissism Inventory

The 52-item Pathological Narcissism Inventory (PNI; Pincus et al., 2009) measures maladaptive expressions of narcissism. Items are scaled on a 6-point Likert scale, ranging from 0 (*not at all like me*) to 5 (*very much like me*), and higher scores indicate higher levels of pathological narcissism (Thomas, Wright, Lukowitsky, Donnellan, & Hopwood, 2012). The PNI consists of seven subscales: Exploitative Tendencies ($\alpha = .93$; 5 items), Contingent Self-Esteem ($\alpha = .93$; 12 items), Self-Sacrificing Self-Enhancement ($\alpha = .78$; 6 items), Grandiose Fantasy ($\alpha = .89$; 7 items) Hiding to the Self ($\alpha = .79$; 7 items), Devaluing ($\alpha = .86$; 7 items) and Entitlement Rage ($\alpha = .87$; 8 items) (Wright, Lukowitsky, Pincus, & Conroy, 2010). These seven subscales underlie two higher order factors: Narcissistic Grandiosity ($\alpha = .89$) and Narcissistic Vulnerability ($\alpha = .96$); subscales of Exploitative Tendencies, Self-Sacrificing, Self-Enhancement, and Grandiose Fantasy load onto the higher order factor of Narcissistic Grandiosity and the subscales Contingent Self-Esteem, Hiding of the Self, Devaluing, and Entitlement Rage load onto Narcissistic Vulnerability (Zeigler-Hill & Besser, 2013). Both composites measured by the PNI were found to be positively related to negative temperament and neuroticism and are related in the expected directions with normal and pathological personality traits (Thomas et al., 2012). Although we explored the relationships between the PNI subscales and RA, scores of the two higher order composites (i.e., Narcissistic

Grandiosity and Narcissistic Vulnerability) were used in the analyses to test our hypotheses.

Narcissistic Personality Inventory

The 40-item Narcissistic Personality Inventory (NPI) was used to assess non-pathological narcissism. The original 54-item version of the NPI was developed by Raskin and Hall (1979) and subsequently shortened to 40 items by Raskin and Terry (1988) while retaining a close relationship ($r = .98$) with the original version (Raskin & Novacek, 1989). The modified 40-item NPI assesses narcissistic traits such authority, exhibitionism, superiority, vanity, exploitativeness, entitlement, and self-sufficiency (Raskin & Terry, 1988). The forced-choice item response format requires respondents to select between a narcissistic response and a non-narcissistic response on each item (e.g., “I have a natural talent for influencing people” vs. “I am not good at influencing people”). One point is given for each item in which the taker has chosen the narcissistic response. The items are summed together and higher scores indicate that the test taker has chosen more narcissistic responses and may have a greater propensity towards narcissism (Twenge, Konrath, Foster, Campbell, & Bushman, 2008). A split half reliability coefficient of .72 was reported by Raskin and Hall (1981), and a 13-week test-retest coefficient of .81 was found by del Rosario and White (2005). Evidence for construct validity has been found through correlations with the Interpersonal Check List (Raskin & Terry, 1988) and NEO-FFI (Corry, Merritt, Mrug, & Pamp, 2008). While the total NPI score is often used, Ackerman, Donnellan, and Robins (2012) noted that this can be misleading given the multidimensional nature of the scale and suggested that the following subscales be used: Leadership/Authority (11 items; $\alpha = .77$), Grandiose

Exhibitionism (10 items; $\alpha = .74$), and Entitlement/Exploitativeness (4 items; $\alpha = .49$), adding that the low internal consistency of the Entitlement/Exploitativeness subscale should be balanced with the considerable evidence supporting its validity. The NPI was included for exploratory purposes to more fully assess the potential role of narcissistic personality features in RA; however, it was not part of the hypotheses. The subscales of this measure were utilized in exploratory analyses to assess their potential for prediction of RA.

Self-Report of Psychopathy Scale-III

Psychopathic personality traits were assessed with the 64-item SRP-III (Williams et al., 2007). Items (e.g., “I purposely flatter people to get them on my side”) are scaled on a 5-point Likert scale from 1 (“disagree strongly”) to 5 (“agree strongly”). This measure is based on Hare’s (2003) four factor model of psychopathy and includes four corresponding subscales: Interpersonal Manipulation, Callous Affect, Anti-Social Behavior, and Erratic Lifestyle. These subscales have demonstrated adequate internal consistency ($\alpha s = .74 - .82$), as has the total SRP-III score ($\alpha = .81$) (Paulhus, Neumann, & Hare, in press). Support for the construct validity of the SRP-III has been reported in the form of inverse relationships with empathy, positively relationships with anti-sociality and other measures of psychopathy (Mahmut, Menictas, Stevenson, & Homewood, 2011; Visser, Ashton, & Pozzebon, 2012). The total SRP-III score was used in the hypotheses; subscales were examined in exploratory analyses.

Procedure

Potential participants were recruited from the University of Southern Mississippi’s subject pool using the Department of Psychology’s web-based research

system (Sona Systems Ltd.). After reading a brief description of the study, potential participants were provided with a URL taking them to the consent form (see Appendix B). After reading and electronically signing the online consent form, participants were directed to the instruments and a brief demographic questionnaire. The order in which instruments appeared to participants was counterbalanced in the following clusters to control for order effects: HEXACO-60, Dark Triad measures, RA scales. To guard against the effects of careless responding, two procedures were implemented. First, as suggested by Huang, Curran, Keeney, Poposki, and DeShon (2012), survey completion time was recorded so that the data from participants who completed the study in far less time than expected could be examined. Second, as recommended by Meade and Craig (2012), two directed response items were added to the questionnaires and formatted to blend in. Each item instructed respondents to answer it in a particular way (e.g., “Answer ‘agree’ to this question”). Participants who failed to answer either item as directed were eliminated. Participants who completed the study received 1 research credit based on an expected 60 minute completion time.

Statistical Analyses

Stage 1: Data Clean-Up and Preliminary Analyses

The electronic data file was downloaded and converted to an SPSS data file. Raw data were examined for missing data and scaling errors, and study variables were created in SPSS syntax. Means, standard deviations, and alpha coefficients were computed for all study variables, and potential gender main effects were tested using one-way Analyses of Variance (ANOVAs). Next, bivariate correlations were computed to examine the interrelationships among variables.

Stage 2: Primary Analyses

After creating a dummy variable for respondent gender, centering each predictor variable, and creating predictor x gender interaction terms, hypotheses 1-4 were tested using two hierarchical multiple regressions. H1 - H4 focused on the utility of HEXACO Honesty-Humility (H1 and H2) and HEXACO Agreeableness (H3 and H4) in predicting proactive and reactive RA. Two hierarchical multiple regressions were computed to test these hypotheses, one for each dependent variable (i.e., proactive RA and reactive RA). In each of these regressions, respondent gender and the independent variables (i.e., HEXACO Honesty-Humility and HEXACO Agreeableness) were entered on Step 1, and the gender interactions terms were entered on Step 2 (i.e., HEXACO Honesty-Humility x gender and HEXACO Agreeableness x gender).

H5 – H10 focused on the utility of the Dark Triad variables (narcissism, Machiavellianism, and psychopathy) in the prediction of proactive and reactive RA. Again, predictor variables were centered, and predictor x gender interaction terms were created. Two hierarchical multiple regressions were computed to test these hypotheses, one for each dependent variable. In each of these regressions, respondent gender and the independent variables (i.e., the Narcissistic Grandiosity and Narcissistic Vulnerability scales of the PNI, MACH-IV total scores, SRP-III total scores) were entered on Step 1, and gender interactions terms were entered on Step 2 (i.e., Narcissistic Grandiosity x gender, Narcissistic Vulnerability x gender, MACH-IV x gender, and SRP-III x gender). Second, proactive RA was regressed on the same predictor variables using the same steps. While we recognize that these hypotheses could have been tested by adding these variables to the same regression equations used above to test hypotheses 1-4, we expected

at least moderate correlations between the HEXACO scales and Dark Triad measures.

As a result, we wanted to evaluate their merit separately before combining them into one predictive model.

Hypotheses 11 and 12 involved testing the combined predictive model in which both the theoretically relevant HEXACO domains and the Dark Triad constructs are examined. Again, these hypotheses were tested with two hierarchical multiple regressions. First, reactive RA was regressed on respondent gender, HEXACO Honesty-Humility, HEXACO Agreeableness, the Narcissistic Grandiosity and Narcissistic Vulnerability scales of the PNI, the MACH-IV total score, the total SRP-III score, and the following interaction terms: HEXACO Honesty-Humility x gender, HEXACO Agreeableness x gender, Narcissistic Grandiosity x gender, Narcissistic Vulnerability x gender, MACH-IV x gender, and SRP-III x gender. Second, proactive RA was regressed on the same predictor variables and interaction terms.

Stage 3: Exploratory Analyses

Exploratory analyses were conducted to examine the potential utility of the subscales of the PNI, NPI, and SRP-III in predicting RA. We were particularly interested in determining whether certain aspects of pathological narcissism (PNI), non-pathological narcissism (NPI), and/or psychopathy (SRP-III) are more closely related with RA than others and whether such relationships differ by the function of RA (i.e., proactive vs. reactive). For example, we speculated that the SRP-III Interpersonal Manipulation subscale might predict proactive but not reactive RA.

CHAPTER III

RESULTS

Data Clean-Up and Preliminary Analyses

Data were downloaded from Qualtrics into SPSS. There were 505 cases initially in the data set, but after manually deleting 33 cases that contained nothing but missing data, there were 472 cases remaining. Of these, 66 were excluded due to failing one or both of the two directed response items, which were included in the questionnaire in order to detect careless responding ($N = 406$). Next, survey completion time was examined in order to further identify participants who completed the survey so quickly that they could not have been responding attentively. Eleven participants were excluded for completing the survey too quickly ($N = 395$). Last, to achieve the target gender balance (e.g., 25% male, 75% female), 19 women were dropped at random, resulting in a final sample size of 376. Alpha coefficients, means, and standard deviations for all variables used in the primary analyses are presented in Table 1 by respondent gender. F -statistics for one-way ANOVAs and effect sizes (i.e., Cohen's d) are also reported. All alpha coefficients for these variables reached or exceeded .70. Significant gender differences were present for PNI Narcissistic Vulnerability, the MACH-IV total score, and the SRP-III total score. Men scored higher on Machiavellian and psychopathic traits than women; women scored higher on narcissistic vulnerability than men.

The two dependent variables (i.e., proactive RA and reactive RA) were examined for normality. Both showed significant skewness in their distributions and were transformed with a logarithmic transformation to reduce skewness.

Table 1

Scale Reliabilities, Means, Standard Deviations, and Gender Differences

		Men		Women			
Variable	α	M	SD	M	SD	$F(1,374)$	d
HEXACO							
H	0.73	3.28	0.6	3.35	0.6	0.86	0.12
A	0.74	3.33	0.58	3.27	0.59	0.47	0.12
SRASBM							
Proactive RA	0.82	9.84	5.82	9.1	5.1	1.37	0.14
Reactive RA	0.82	12.94	6.97	13.4	6.52	0.33	0.06
PNI							
Grandiosity	0.87	2.73	0.77	2.79	0.83	0.32	0.1
Vulnerability	0.94	1.88	0.9	2.12	0.94	4.40 *	0.26
MACH-IV	0.70	2.72	0.43	2.6	0.39	6.25 *	0.29
SRP-III	0.93	2.42	0.47	2.16	0.47	22.02 **	0.55

Note. H = Honesty-Humility; A = Agreeableness; SRASBM = Self-Report of Aggression and Social Behavior Measure; RA = relational aggression; PNI = Pathological Narcissism Inventory; SRP-III = Self-Report of Psychopathy Scale-III.

* $p < .05$. ** $p < .01$.

Next, all continuous independent variables used in the primary analyses were examined for normality. The PNI Narcissistic Grandiosity scale exhibited moderate skewness and was transformed using a square root transformation. Unless otherwise noted, transformed scores were used for these variables in subsequent analyses.

Intercorrelations among the variables used in the primary analyses were computed separately for women and men. Tests for the difference between independent correlations were run (see Bruning & Kintz, 1997) to determine how best to report the correlations among variables. None of the comparisons were significant (i.e., the strength

of the relationships among variables did not differ for women and men), and so correlational data are presented in Table 2 for the full sample. Scores on the Honesty-Humility and Agreeableness scales of the HEXACO were inversely related to both proactive and reactive RA, indicating that participants with higher scores on these measures were less likely to report engaging in proactive or reactive relational aggression. On the other hand, scores on the MACH-IV, PNI Narcissistic Vulnerability and Narcissistic Grandiosity scales, and the SRP-III were positively related to both proactive and reactive RA, indicating that participants with higher scores on measures of these characteristics were more likely to report proactive and reactive relational aggression. Consistent with previous reports in the literature, proactive and reactive RA were correlated ($r = .76$).

Table 2

Intercorrelations of Variables

	1	2	3	4	5	6	7
1. H	--						
2. A	.31*	--					
3. Proactive RA	-.42*	-.39*	--				
4. Reactive RA	-.44*	-.41*	.76*	--			
5. MACH-IV	-.53*	-.39*	.37*	.40*	--		
6. Grandiosity	-.29*	-.13	.19*	.20*	.12	--	
7. Vulnerability	-.39*	-.39*	.46*	.47*	.34*	.64*	--
8. SRP-III	-.52*	-.41*	.48*	.46*	.59*	.22*	.37*

Note. H = Honesty-Humility; A = Agreeableness; RA = relational aggression; SRP-III = Self-Report of Psychopathy Scale-III.

* $p < .01$

Primary Analyses

Prior to conducting the primary analyses, a dummy gender variable was created (0 = women, 1 = men), and all predictor variables were centered to reduce multicollinearity and facilitate interpretation. In order to explore the utility of the HEXACO Honesty-Humility and Agreeableness scales in predicting reactive RA (H1 – H4), two hierarchical multiple regressions were computed. First, reactive RA was regressed on respondent gender, Honesty-Humility, Agreeableness, and the following interactions terms: Honesty-Humility x gender and Agreeableness x gender. Respondent gender, Honesty-Humility, and Agreeableness were entered in the first step, and the interaction terms were entered in the second step (see Table 3). Honesty-Humility and Agreeableness predicted reactive RA while taking respondent gender into account. Both were negative predictors (i.e., lower scores on these scales was associated with higher reactive RA). The interaction terms tested on Step 2 were not significant, indicating that the predictive utility of these scales did not differ for women and men. Thus, H1 and H3 were supported.

Second, proactive RA was regressed on respondent gender, Honesty-Humility, Agreeableness, and the following interactions terms: Honesty-Humility x gender and Agreeableness x gender. Honesty-Humility and Agreeableness were entered in the first step, and the interaction terms were entered in the second step (see Table 4). Honesty-Humility and Agreeableness were negative predictors (i.e., lower scores were associated with higher proactive RA), and the interaction effects tested on Step 2 were not significant. Again, both Honesty-Humility and Agreeableness predicted proactive RA for both women and men. Thus, H2 and H4 were supported.

Table 3

Hierarchical Regression Analysis Summary for the Honesty-Humility and Agreeableness Predicting Reactive Relational Aggression (N = 376)

Variable	<i>B</i>	95% CI	<i>SE B</i>	β	R^2	ΔR^2
Step 1					.28	.28*
Gender	-.03	[-.07, .02]	.02	-.05		
H	-.12	[-.15, -.09]	.02	-.34*		
A	-.11	[-.14, -.07]	.02	-.30*		
Step 2					.28	.00
H x Gender	.04	[-.03, .11]	.04	.06		
A x Gender	-.02	[-.09, .06]	.04	-.02		

Note. H = Honesty-Humility; A = Agreeableness.

* $p < .01$.

In order to explore the utility of the PNI Narcissistic Grandiosity and Narcissistic Vulnerability scales, the SRP-III total score, and the MACH-IV total score in predicting reactive and proactive RA (H5-H10), two hierarchical multiple regressions were computed. First, reactive RA was regressed on respondent gender, PNI Narcissistic Vulnerability, PNI Narcissistic Grandiosity, SRP-III total score, MACH-IV total score, and the following interactions terms: PNI Vulnerability x gender, PNI Grandiosity x gender, SRP-III total score x gender, and MACH-IV total score x gender.

The two PNI scales, SRP-III total score, MACH-IV total score were entered in the first step, and the interaction terms were entered in the second step. After removing one outlier, the two PNI scales, MACH-IV, and SRP-III total scores predicted reactive RA (see Table 5).

Table 4

*Hierarchical Regression Analysis Summary for Honesty-Humility and Agreeableness**Predicting Proactive Relational Aggression (N = 376)*

Variable	<i>B</i>	95% CI	<i>SE B</i>	β	R^2	ΔR^2
Step 1					.25	.25*
Gender	.02	[-.02, .07]	.02	.04		
H	-.12	[-.15, -.09]	.02	-.33*		
A	-.10	[-.14, -.07]	.02	-.29*		
Step 2					.26	.00
H x Gender	.02	[-.06, .09]	.04	.02		
A x Gender	-.01	[-.08, .07]	.04	-.01		

Note. H = Honesty-Humility; A = Agreeableness.

* $p < .01$.

Narcissistic, Machiavellian, and psychopathic traits were all positively associated with reactive RA, supporting H5, H7, and H9. Of the interaction terms tested on Step 2, the MACH-IV x gender interaction was significant, indicating that the relationship between total scores on the MACH-IV and reactive RA differed for women and men. This interaction was probed using Soper's (2013) Interaction software. A visual examination of the plotted interaction effect suggested that scores on the MACH-IV were positively related to reactive RA for women but not for men. The simple slope of the relationship between scores on the MACH-IV and reactive RA was significant for women (simple slope = .11), $t(365) = 3.37$, $p < .001$ but not for men (simple slope = -.08), $t(365) = -1.54$, $p = .12$. To ensure that this possible moderation effect was not due to the presence of the other variables in this regression model, a moderated multiple regression was conducted in which reactive RA was regressed on gender and MACH-IV

total scores on Step 1 and the MACH-IV x gender interaction term on Step 2. This time, the change in R^2 on Step 2 was not significant, indicating that moderation was not confirmed, $\Delta R^2 = .01$, $F(1,372) = 2.97$, $p = .09$. While gender moderated the relationship between the MACH-IV and reactive RA when all other variables were included in the model, it did not appear to do so when examined in isolation.

Table 5

*Hierarchical Regression Analysis Summary for the PNI, SRP-III and MACH-IV
Predicting Reactive Relational Aggression (N = 375)*

Variable	<i>B</i>	95% CI	<i>SE B</i>	<i>B</i>	R^2	ΔR^2
Step 1					.37	.37**
Gender	-.04	[-.08, -.00]	.02	-.08		
Grandiosity	.14	[-.04, .23]	.05	.15**		
Vulnerability	.09	[-.07, .12]	.01	.43**		
MACH-IV	.05	[-.00, .11]	.03	.11*		
SRP-III	.13	[-.08, .17]	.02	.30**		
Step 2					.39	.02*
Grandiosity x Gender	.14	[-.09, .36]	.11	.07		
Vulnerability x Gender	.06	[-.00, .11]	.02	.12		
MACH-IV x Gender	-.18	[-.30, -.07]	.06	-.20**		
SRP-III x Gender	-.09	[-.02, -.19]	.05	.11		

Note. SRP-III = Self-Report of Psychopathy Scale-III.

* $p < .05$. ** $p < .01$.

Next, proactive RA was regressed on respondent gender, the two PNI scales, SRP-III total score, MACH-IV total score, and the following interactions terms: PNI Vulnerability x gender, PNI Grandiosity x gender, SRP-III total score x gender, and MACH-IV total score x gender (H11-H12). PNI Vulnerability, PNI Grandiosity, SRP-III total score, MACH-IV total score, and gender were entered in the first step; the interaction terms were entered in the second step. After removing one outlier, the PNI

scales and SRP-III total scores emerged as positive predictors of proactive RA (see Table 6). The interaction effects tested on Step 2 were not significant, indicating that these relationships did not differ by respondent gender. Thus, H6 and H10 were supported; H8 was not supported.

Table 6

*Hierarchical Regression Analysis Summary for the PNI, SRP-III, and MACH-IV
Predicting Proactive Relational Aggression (N = 375)*

Variable	<i>B</i>	95% CI	<i>SE B</i>	β	<i>R</i> ²	ΔR^2
Step 1					.35	.35*
Gender	.01	[-.04, .05]	.02	.01		
Grandiosity	.15	[.05, .25]	.05	.16*		
Vulnerability	.10	[.07, .13]	.01	.44*		
MACH-IV	.02	[-.03, .08]	.03	.04		
SRP-III	.15	[.10, .20]	.02	.33*		
Step 2					.36	.00
Grandiosity x Gender	.03	[-.20, .27]	.12	.02		
Vulnerability x Gender	.02	[-.04, .08]	.03	.04		
MACH-IV x Gender	-.06	[-.18, .07]	.06	-.06		
SRP-III x Gender	.05	[-.06, .16]	.06	.06		

Note. SRP-III = Self-Report of Psychopathy Scale-III.

* $p < .01$.

In order to identify the optimal combination of predictors and test H11 and H12, reactive RA was regressed on respondent gender, Honesty-Humility, Agreeableness, Narcissistic Vulnerability, Narcissistic Grandiosity, SRP-III total score, MACH-IV total score, and the following interactions terms: Honesty-Humility, x gender, Agreeableness x gender, Narcissistic Vulnerability x gender, Narcissistic Grandiosity x gender, SRP-III total score x gender, and MACH-IV total score x gender (H11). Honesty-Humility,

Agreeableness, Narcissistic Vulnerability, Narcissistic Grandiosity, SRP-III total score, MACH-IV total score, and gender were entered in the first step, and the interaction terms were entered in the second step.

After removing one outlier, Honesty-Humility, Agreeableness, Narcissistic Grandiosity, Narcissistic Vulnerability, and SRP-III total scores were predicted reactive RA (see Table 7). The MACH-IV did not contribute to the prediction of reactive RA when considered along with all other predictor variables. Thus, H11 was supported for all predictors except Machiavellianism. The change in R^2 on Step 2 was significant, indicating that some of the variables (Honesty-Humility, Narcissistic Vulnerability, the MACH-IV, and the SRP-III) interacted with gender on this step.

Interaction effects involving gender and each of the following predictor variables were probed with Interaction: Honesty-Humility, Narcissistic Vulnerability, MACH-IV total scores, and SRP-III total scores. Visual examination of the plotted gender x Honesty-Humility interaction suggested that there was a relationship between Honesty-Humility and reactive RA for women but not men. This was confirmed in that the simple slope of the relationship between Honesty-Humility and reactive RA was significant for women (simple slope = $-.07$), $t(362) = -3.66$, $p < .001$ but not for men (simple slope = 0.02), $t(362) = 0.45$, $p = .65$. The plotted gender x Narcissistic Vulnerability interaction suggested that the relationship between Narcissistic Vulnerability and reactive RA was somewhat stronger for men than for women. The simple slope of the relationship between scores on Narcissistic Vulnerability and reactive RA was significant for women (simple slope = $.07$), $t(362) = 4.35$, $p < .001$ and for men (simple slope = $.11$), $t(362) = 4.18$, $p < .001$. The plot of the gender x MACH-IV interaction suggested that scores on

the MACH-IV were positively related to reactive RA for women and negatively related to reactive RA for men; however, the simple slopes of the relationship between the MACH-IV and reactive RA were not significant for women (simple slope = .06), $t(361) = 1.78$, $p = .08$ or for men (simple slope = -.07), $t(361) = -1.40$, $p = .16$. Finally, visual examination of the plotted gender x SRP-III total scores interaction suggested that the strength of the relationship between SRP-III scores and reactive RA was stronger for men than for women. The simple slopes of the relationship between SRP-III scores and reactive RA was significant for women (simple slope = .07), $t(362) = 2.46$, $p < .05$ and men (simple slope = .18), $t(362) = 3.35$, $p < .001$. As before, these effects appear to be context-dependent in that respondent gender did not appear to moderate the relationships when predictor variables were examined in isolation.

Table 7

Hierarchical Regression Analysis Summary for Honesty-Humility, Agreeableness, PNI, SRP-III and MACH-IV Predicting Reactive Relational Aggression (N = 375)

Variable	<i>B</i>	95% CI	<i>SE B</i>	β	R^2	ΔR^2
Step 1					.40	.39**
Gender	-.03	[-.07, .01]	.02	-.06		
H	-.06	[-.09, -.02]	.02	-.17**		
A	-.05	[-.08, -.02]	.02	-.14**		
Grandiosity	.14	[.04, .23]	.05	.15**		
Vulnerability	.08	[.05, .11]	.01	.37**		
MACH-IV	.02	[-.04, .07]	.03	.03		
SRP-III	.09	[.05, .14]	.02	.22**		
Step 2					.42	.03*
H x Gender	.10	[.01, .19]	.05	.15*		
A x Gender	.02	[-.06, .10]	.04	.03		
Grandiosity x Gender	.10	[-.12, .32]	.11	.05		

Table 7 (continued).

Variable	<i>B</i>	95% CI	<i>SE B</i>	β	R^2	ΔR^2
Vulnerability x Gender	.07	[-.01, .11]	.03	.14*		
MACH-IV x Gender	-.13	[-.25, -.01]	.06	-.14*		
SRP-III x Gender	.13	[.01, .24]	.06	.15*		

Note. H = Honesty-Humility; A = Agreeableness; SRP-III = Self-Report of Psychopathy Scale-III.

* $p < .05$. ** $p < .01$.

Last, proactive RA was regressed on respondent gender, Honesty-Humility, Agreeableness, Narcissistic Vulnerability, Narcissistic Grandiosity, SRP-III total score, MACH-IV total score, and the following interactions terms: Honesty-Humility, x gender, Agreeableness x gender, Narcissistic Vulnerability x gender, Narcissistic Grandiosity x gender, SRP-III total score x gender, and MACH-IV total score x gender (H12). Honesty-Humility, Agreeableness, Narcissistic Vulnerability, Narcissistic Grandiosity, SRP-III total score, MACH-IV total score, and gender were entered in the first step, and the interaction terms were entered in the second step. After removing one outlier, Honesty-Humility, Agreeableness, Narcissistic Grandiosity and Vulnerability, and the SRP-III were positive predictors of proactive RA (see Table 8); the MACH-IV did not predict proactive RA. Thus, H12 was supported for all variables except Machiavellianism. The change in R^2 on Step 2 was significant, indicating that two of the variables (i.e., Honesty-Humility and the SRP-III) interacted with gender on this step. As before, these interactions were probed with Interaction. Examination of the plotted gender x Honesty-Humility interaction suggested that Honesty-Humility was positively related to proactive RA for men and negatively related to proactive RA for women;

however, the simple slope of the relationship between Honesty-Humility and proactive RA was significant for women (simple slope = -.08), $t(361) = -3.78$, $p < .001$ but not for men (simple slope = 0.04), $t(361) = 0.93$, $p = .35$. The plotted gender x SRP-III interaction suggested that the relationship between scores on the SRP-III and proactive RA was stronger for men than for women. The simple slope of the relationship between scores on the SRP-III and proactive RA was significant for men (simple slope = .22), $t(361) = 3.99$, $p < .001$ and for women (simple slope = .08), $t(361) = 2.94$, $p < .01$. Again, gender did not moderate these relationships when predictors were examined in isolation.

Table 8

Hierarchical Regression Analysis Summary for Honesty-Humility, Agreeableness, PNI, SRP-III and MACH-IV Predicting Proactive Relational Aggression (N = 375)

Variable	<i>B</i>	95% CI	<i>SE B</i>	<i>B</i>	<i>R</i> ²	ΔR^2
Step 1					.38	.38**
Gender	.02	[-.02, .06]	.02	.04		
H	-.06	[-.10, -.02]	.02	-.17**		
A	-.05	[-.08, -.01]	.02	-.13*		
PNI Grandiosity	.15	[-.05, .25]	.05	.16**		
PNI Vulnerability	.09	[-.06, .11]	.01	.38**		
MACH-IV	-.01	[-.07, .04]	.03	-.03		
SRP-III	.11	[-.06, .16]	.03	.25**		
Step 2					.40	.02
H x Gender	.12	[-.02, .21]	.05	.17*		
A x Gender	.05	[-.03, .14]	.04	.07		
Grandiosity x Gender	.03	[-.20, .27]	.12	.02		
Vulnerability x Gender	.06	[-.01, .13]	.03	.13		
MACH-IV x Gender	-.03	[-.16, .10]	.07	-.04		
SRP-III x Gender	.14	[-.01, .26]	.06	.16*		

Note. H = Honesty-Humility; A = Agreeableness; SRP-III = Self-Report of Psychopathy Scale-III.

* $p < .05$. ** $p < .01$.

Exploratory Analyses

Alpha coefficients, means, and standard deviations for all variables used in the exploratory analyses are presented in Table 9. All variable alpha coefficients exceeded .70, except for Entitlement/Exploitativeness ($\alpha = .42$). Significant gender differences are noted for HEXACO Emotionality, NPI Entitlement/Exploitativeness, three PNI subscales (i.e., Self-Sacrificing Self-Enhancement, Hiding the Self, and Devaluing), and each of the four SRP-III subscales. Specifically, men scored higher on the SRP-III subscales and NPI Entitlement/Exploitativeness than women; women scored higher on PNI Self-Sacrificing Self-Enhancement, Hiding the Self, Devaluing, and HEXACO Emotionality than men.

Given the strength of the relationship between reactive RA and proactive RA ($r = .76$), we computed residualized measures of proactive RA and reactive RA as described by Raine and colleagues (2006). Specifically, reactive RA was regressed on proactive RA to yield Pearson standardized residuals (i.e., Z scores with a mean of 0 and standard deviation of 1) reflecting a more “pure” form of proactive RA. Similarly, proactive RA was regressed on reactive RA to produce standardized residuals indicating a purer form of reactive RA. Thus, residualized reactive RA represents a measure of reactive RA independent of proactive RA, and residualized proactive RA represents a measure of proactive RA independent of reactive RA.

Correlations between the six HEXAO scales, the seven PNI subscales, the NPI total score and two of the three NPI subscales (Entitlement/Exploitativeness was not sufficiently reliable) recommended by Ackerman and colleagues (2012), the MACH-IV total score, and the four SRP-III scales with both the raw and residualized SRASBM

proactive and reactive RA scales were computed (see Table 10). In looking at the HEXACO scales, it is clear that Honesty-Humility and Agreeableness are relevant to RA, as predicted. Honesty-Humility was inversely correlated with both proactive and reactive RA, including their residualized versions. Agreeableness was inversely related to proactive and reactive RA but was unrelated to the residualized measure of proactive RA. Unexpectedly, it appears that Conscientiousness may also be relevant to RA, as it was inversely related to both proactive and reactive RA (though not to the residualized measure of proactive RA) at a similar strength as Honesty-Humility and Agreeableness were. Thus, Honesty-Humility appears useful in understanding both proactive and reactive RA while Agreeableness and Conscientiousness may be somewhat more relevant to reactive than proactive RA.

Table 9

Scale Reliabilities, Means, Standard Deviations, and Univariate Gender Differences

Variable	<i>A</i>	Men		Women		<i>F</i> (1,374)	<i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
HEXACO							
H	0.73	3.28	0.60	3.35	0.60	0.86	0.12
E	0.73	3.09	0.54	3.56	0.03	49.15**	0.23
X	0.74	3.28	0.62	3.39	0.04	2.37	0.25
A	0.74	3.33	0.58	3.28	0.04	2.48	0.12
C	0.76	3.48	0.55	3.60	0.04	3.06	0.31
O	0.75	3.25	0.69	3.21	0.04	0.24	0.08

Table 9 (continued).

		Men		Women			
Variable	<i>A</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (1,374)	<i>d</i>
PNI							
Contingent Self-Esteem	0.93	1.75	1.13	1.93	1.18	1.67	0.16
Exploitative	0.76	2.28	0.98	2.26	1.03	0.02	0.02
Self-Sacrificing Self-Enhancement	0.78	2.83	0.92	2.99	0.99	2.13*	0.17
Hiding the Self	0.81	2.60	0.96	2.95	1.14	7.41*	0.33
Grandiose Fantasy	0.86	2.98	1.09	2.99	1.15	0.01	0.01
Devaluing	0.86	1.59	0.99	1.86	1.11	4.67*	0.01
Entitlement Rage	0.88	1.74	0.99	1.92	1.05	1.95	0.18
NPI							
Entitlement/Exploitativeness	0.42	1.09	1.16	0.78	0.91	7.17*	0.29
Leadership/Authority	0.78	0.40	0.28	0.50	0.27	0.37	0.36
Grandiose Exhibitionism	0.71	0.39	0.24	0.37	0.24	0.43	0.08
NPI Total Score	0.85	16.98	7.39	16.01	6.92	1.34	0.14
SRP-III							
Interpersonal Manipulation	0.79	2.59	0.61	2.36	0.60	9.94*	0.38
Callous Affect	0.79	2.60	0.51	2.21	0.54	37.32**	0.74
Anti-Social Behavior	0.81	1.82	0.68	1.61	0.51	10.65*	0.35
Erratic Lifestyle	0.81	2.70	0.56	2.48	0.63	8.84*	0.37

Note. H = Honesty-Humility; A = Agreeableness; E = Emotionality; X = Extraversion; C = Conscientiousness;

O = Openness to Experience; PNI = Pathological Narcissism Inventory; NPI = Narcissistic Personality

Inventory; SRP-III = Self-Report of Psychopathy Scale-III

* $p < .05$. ** $p < .01$

With regard to the two measures of narcissism, both showed many significant relationships with RA. On the PNI, scores on Contingent Self-Esteem, Devaluing, and Entitlement Rage were positively correlated with proactive and reactive RA, including the residualized measures. The Exploitative scale was positively related to both proactive and reactive RA but not to residualized reactive RA. Hiding the Self was related to proactive and reactive RA but not to the residualized version of proactive RA. Grandiose Fantasy was related only to reactive RA but not to the residualized version. Self-Sacrificing Self-Enhancement was unrelated to all measures of proactive and reactive RA. On the NPI, Leadership/Authority was related to proactive RA, including the residualized version, but not reactive RA. Grandiose Exhibitionism and the NPI total score were related to both proactive and reactive RA but not to residualized version of reactive RA.

Table 10

Correlations of the HEXACO, PNI, NPI, MACH-IV, and SRP-III Scales With Raw and Residualized Proactive and Reactive Relational Aggression

	Proactive RA	Residualized Proactive RA	Reactive RA	Residualized Reactive RA
HEXACO				
H	-.42*	-.14*	-.44*	-.17*
E	-.03	-.08	-.02	-.07
X	-.11	-.01	-.15*	-.11
A	-.39*	-.12	-.41*	-.18*
C	-.34*	-.09	-.37*	-.18*
O	-.16*	-.06	-.16*	-.07

Table 10 (continued).

	Proactive RA	Residualized Proactive RA	Reactive RA	Residualized Reactive RA
PNI				
Contingent Self-Esteem	.40*	.15*	.39*	.14*
Exploitative	.31*	.20*	.23*	.00
Self-Sacrificing Self-Enhancement	-.06	.01	-.09	-.07
Hiding the Self	.16*	-.05	.25*	.20*
Grandiose Fantasy	.11	-.02	.15*	.11
Devaluing	.47*	.18*	.47*	.17*
Entitlement Rage	.52*	.20*	.51*	.18*
NPI				
Leadership/Authority	.20*	.17*	.11	-.06
Grandiose Exhibitionism	.27*	.18*	.20*	-.00
NPI Total Score	.31*	.22*	.22*	-.03
MACH-IV	.37*	.10	.40*	.18*
SRP-III				
Interpersonal Manipulation	.46*	.20*	.44*	.13
Callous Affect	.37*	.14*	.36*	.13
Anti-Social Behavior	.37*	.10	.40*	.19*
Erratic Lifestyle	.35*	.19*	.30*	.05

Note: RA = relational aggression; H = Honesty-Humility; A = Agreeableness; E = Emotionality; X = Extraversion; C = Conscientiousness; O = Openness to Experience; PNI = Pathological Narcissism Inventory; NPI = Narcissistic Personality Inventory; SRP-III = Self-Report of Psychopathy Scale-III

* $p < .01$

The MACH-IV was included in Table 10 in spite of being reported earlier in order to compare its relationship with both the raw and residualized versions of proactive and reactive RA. As previously noted, it was positively correlated with reactive RA and not with proactive RA; similarly, it was related to residualized reactive RA and not to residualized proactive RA.

On the SRP-III, Interpersonal Manipulation, Callous Affect, and Erratic Lifestyle were all positively related to raw and residualized proactive RA and to raw but not residualized reactive RA. On the other hand, Anti-Social Behavior was positively related to raw and residualized reactive RA and to raw but not residualized proactive RA.

To explore the role of the various components of pathological narcissism in proactive and reactive relational aggression, two multiple regressions were computed. First, residualized proactive RA was regressed on the seven PNI subscales, all of which were entered simultaneously on a single step. After removing two outliers, the model was significant, $R^2 = .12$, $p < .001$. Given that the PNI subscales are correlated, the variance inflation factor (*VIF*) estimates for each subscale was examined. All *VIF* values were below 3, indicating that multicollinearity was not a problem. When all PNI subscales were included, only the Exploitative and Hiding the Self emerged as significant predictors of residualized proactive RA, β s = .25 and -.24, $t(366)$ s = 4.49 and -3.58, $ps < .001$, respectively. Second, residualized reactive RA was regressed on the seven PNI subscales. After removing one outlier, the model was significant, $R^2 = .08$, $p < .001$. Exploitative, $\beta = -.16$, $t(367) = -2.80$, $p < .01$, Hiding the Self, $\beta = .18$, $t(367) = 2.60$, $p < .05$, and Entitlement Rage, $\beta = .19$, $t(367) = 2.27$, $p < .05$, emerged as significant predictors of residualized reactive RA.

Finally, to explore the role of the various components of psychopathy in proactive and reactive relational aggression, two additional multiple regressions were computed. Residualized proactive RA was regressed on the four SRP-III subscales, all of which were entered simultaneously on a single step. After removing one outlier and confirming that all *VIF* values were below 3, the model was significant, $R^2 = .08$, $p < .001$.

Interpersonal Manipulation and Anti-Social Behavior predicted residualized proactive RA, β s = .26 and .15, $t(370)$ s = 3.41 and 2.61, $ps < .01$, respectively. Next, residualized reactive RA was regressed on the four SRP-III scales. This model was significant, $R^2 = .03$, $p < .05$; however, only Erratic Lifestyle emerged as a significant predictor of residualized reactive RA, $\beta = .17$, $t(370) = 2.37$, $p < .05$.

CHAPTER IV

DISCUSSION

The present study extends the literature on relational aggression (RA) by examining the degree to which the HEXACO model of personality and the Dark Triad variables predict proactive and reactive RA in the peer relationships of a college student sample. No previous studies were found that examined the HEXACO model as a possible predictor of RA; thus, these findings address a gap in the literature regarding these constructs. As expected, two of the domains assessed by the HEXACO (i.e., honesty-humility and agreeableness) predicted both proactive and reactive RA while taking respondent gender into account. Students who were lower in honesty-humility and agreeableness reported engaging in more relationally aggressive behaviors in their peer relationships. These relationships did not vary by respondent gender. With regard to the Dark Triad variables, the two forms of pathological narcissism assessed by the Pathological Narcissism Inventory (i.e., grandiose narcissism and narcissistic vulnerability) and psychopathic traits predicted both reactive and proactive RA. Students higher in pathological narcissism and psychopathic traits reported utilizing higher levels of RA in their peer relationships. Machiavellian traits predicted reactive but not proactive RA. When the honesty-humility and agreeableness were included along with measures of the Dark Triad constructs, honesty-humility, agreeableness, both forms of pathological narcissism, and psychopathic traits predicted both proactive and RA.

Relational Aggression and the HEXACO Personality Model

A number of adverse correlates of relational aggression have been identified (e.g., anxiety, stress depression, self-harm, academic burnout, adjustment difficulties) in

previous research among emerging adults (Dahlen et al., 2013; Linder et al., 2002; Miller & Lynam, 2003; Ostrov & Houston, 2008; Storch et al., 2003; Werner & Crick, 1999). Much of the research involving the broad dimensions of normal personality and RA has focused on the utility of the Five Factor Model (FFM) of personality; the present study examined the six-factor HEXACO model of personality and the Dark Triad constructs. Based on the present findings, both appear to be relevant to understanding peer directed reactive and proactive RA among college students.

While the HEXACO model has some similarities to the more commonly used FFM of personality, it has been described as having some advantages over when examining “darker” aspects of personality and other socially undesirable behaviors (Gaughan et al., 2012; Lee & Ashton, 2005). For this reason, the present study examined the utility of the HEXACO model in predicting RA. Based on previous research showing that FFM Agreeableness was inversely related to RA, overt narcissistic aggression, and psychological aggression (Egan & Lewis, 2011; Miller et al., 2012) and that HEXACO Agreeableness was inversely related to displaced aggression and vengeance (Lee & Ashton, 2012a), we expected that HEXACO Agreeableness would predict RA. We found that HEXACO Agreeableness predicted both proactive and reactive RA while taking participant gender into account, indicating that participants lower in agreeableness were more likely to engage in relationally aggressive behaviors towards their peers. Thus, despite the differences between HEXACO Agreeableness and FFM Agreeableness, our findings suggest a similar relationship with RA.

Similarly, previously reported relationships between HEXACO Honesty-Humility with both vengeance and the manipulation and exploitation of others (Lee & Ashton,

2012b) led us to expect that the traits assessed by this scale would be relevant to understanding RA. We found that HEXACO Honesty-Humility predicted both proactive and reactive RA while taking respondent gender into account. Respondents lower in honesty-humility reported engaging in more relationally aggressive behaviors. Honesty-humility, which is unique to the HEXACO and includes traits such as sincerity, fairness, and lack of entitlement, appears to be relevant in understanding RA among emerging adults. This finding adds to previous research that has shown that certain personality traits (i.e., neuroticism, agreeableness, extraversion) are related to the tendency to engage in relationally aggressive behavior and other theoretically similar constructs (i.e., vengeance, psychological aggression, narcissistic aggression) (Ashton & Lee, 2007; Egan & Lewis, 2011; Hines & Saudino, 2008; Lee & Ashton, 2012b; Miller et al., 2012;).

It is noteworthy that when HEXACO Honesty-Humility and Agreeableness were included in regression models along with the Dark Triad personality constructs (addressed below), both emerged as significant predictors of reactive and proactive RA. That is, these HEXACO scales explained significant variance in reactive and proactive RA even while taking respondent gender, pathological narcissism, Machiavellianism, and psychopathic traits into account. These findings provide clear support for the utility of these traits in the study of relational aggression among emerging adults. In the context of these regression models, respondent gender moderated the relationship of honesty-humility with reactive RA (i.e., the relationship was significant for women but not for men) and proactive RA (i.e., the relationship was again significant for women but not men); however, these relationships appear to be context-dependent because there was no evidence of moderation when the other variables were omitted from the model.

Based on our exploratory analyses regarding the relationship between the HEXACO constructs and both raw and residualized measures of proactive and reactive RA, the case for continuing to include honesty-humility as a variable in studies of relational aggression is clear. It was inversely related to both raw and residualized forms of both proactive and reactive RA. Agreeableness was inversely related to both raw and residualized reactive RA and to raw but not residualized proactive RA. Thus, it may have somewhat more utility in reactive relational aggression. Moreover, it appears that HEXACO Conscientiousness may be worth including in future studies, especially those focusing on reactive RA. Conscientiousness was inversely related to both raw and residualized reactive RA and to raw but not residualized proactive RA, and the strength of these relationships was comparable to those involving honesty-humility and agreeableness.

The Dark Triad and Relational Aggression

The Dark Triad constructs of pathological narcissism (i.e., narcissistic grandiosity and narcissistic vulnerability), Machiavellianism, and psychopathy were expected to aid in the understanding of relational aggression based on their utility in predicting similar traits and behaviors (e.g., criminal behavior, self-promotion at the expense of others, interpersonal manipulation) in previous research (Jakobwitz & Egan, 2006; Lee et al., 2013). Collectively, these traits indicate callous affect, low empathy, and manipulative efforts without concern or regard towards others (Jonason et al., 2013; Rauthmann & Kolar, 2012), making them relevant to understanding a variety of aggressive behaviors. As expected, we found that both components of pathological narcissism, Machiavellianism, and psychopathy predicted reactive RA while accounting for

respondent gender. All were positive predictors, indicating that respondents higher in these traits reported more reactive relational aggression. Both components of pathological narcissism and psychopathy were also positive predictors of proactive RA; however, Machiavellianism did not contribute to the prediction of proactive RA.

Although there was evidence that respondent gender moderated the relationship between Machiavellianism and reactive RA (i.e., there was a positive relationship between these variables for women but not for men), it appears that this relationship was contingent on the other variables in the regression model. After probing the interaction in the context of the full model, we ran another regression without any of the other variables (i.e., including only respondent gender, Machiavellianism, and the gender x Machiavellianism interaction term in the prediction of reactive RA) and found no evidence of moderation.

When regression models included HEXACO Honesty-Humility and Agreeableness on a previous step, both components of pathological narcissism and psychopathy were significant predictors of reactive RA; Machiavellianism no longer contributed to the prediction of reactive relational aggression. In the context of this model, respondent gender moderated the relationships between three Dark Triad predictors (i.e., narcissistic vulnerability, Machiavellianism, and psychopathy) and reactive RA. However, these effects once again appeared to be context-specific. When the other variables in each model were excluded, respondent gender no longer moderated these relationships.

The present finding that pathological narcissism predicted both proactive and reactive RA, even when accounting for respondent gender, honesty-humility, and

agreeableness, provides further support for the utility of narcissism in understanding relational aggression in emerging adults. Narcissistic traits have been shown to predict relational aggression among adolescents (Barry et al., 2007; Lau & Marsee, 2013; Lau et al., 2011). The present study provides additional evidence suggesting that pathological narcissism, including both narcissistic grandiosity and narcissistic vulnerability as assessed with the Pathological Narcissism Inventory (PNI), were positive predictors of both proactive and reactive RA. The narcissistic propensity towards “pay-back” and a lack of empathy for others could function as motivators for the engagement in relational aggression.

Exploratory analyses comparing the subscales of the PNI with both raw and residualized versions of proactive and reactive RA suggested that some subscales (i.e., Contingent Self-Esteem, Devaluing, and Entitlement Rage) are likely to be useful in understanding both proactive and reactive RA while others may be more relevant to the proactive (i.e., Exploitative) or reactive (i.e., Hiding the Self) functions of relational aggression. Future research on pathological narcissism in relationally aggressive behaviors might find it useful to examine different components of pathological narcissism depending on whether proactive or reactive RA is the focus. Based on our analyses using residualized versions of the dependent variables, the best candidates for continued investigation would appear to be the Exploitative and Hiding the Self subscales for proactive RA and Exploitative, Hiding the Self, and Entitlement Rage for reactive RA.

Exploratory analyses comparing the Narcissistic Personality Inventory (NPI) with raw and residualized measures of proactive and reactive RA also revealed significant

relationships and provided additional evidence that the components of narcissism appear to be differentially related to proactive and reactive RA. In general, it appeared that the less pathological form of narcissism assessed by the NPI was somewhat more closely related to proactive than reactive RA, as NPI total scores were positively related to both raw and residualized versions of proactive RA and to raw but not residualized reactive RA and Ackerman and colleagues' (2012) Leadership/Authority and Grandiose Exhibitionism scales were more closely related to proactive than reactive RA.

It was not surprising that psychopathic traits, including interpersonal problems, manipulateness, impulsivity, and a lack of remorse and guilt (Ansel, 2009; Drislane et al., 2013; Hare & Neumann, 2009), also predicted both proactive and reactive RA. Psychopathy is a well-established predictor of overt aggression (Hare & Neumann, 2009), and psychopathic traits have previously been shown to predict peer and romantic relational aggression among college students (Czar et al., 2011; Coyne & Thomas, 2008; Schmeelk et al., 2008). The present study supported the utility of psychopathic traits in the prediction of RA while using a measure based on Hare's (2003) four-factor model of psychopathy (e.g., interpersonal, affective, lifestyle, antisocial behavior). This finding adds to previous research showing psychopathy has utility in predicting relational aggression and other theoretically similar forms of aggression.

Exploratory analyses revealed that all four subscales of the Self-Report of Psychopathy Scale-III (SRP-III) were positively related to relational aggression. In examining bivariate relationships, it appeared that Interpersonal Manipulation, Callous Affect, and Erratic Lifestyle might be more relevant to proactive RA while Anti-Social Behavior might be more relevant to reactive RA. When all subscales were used as

simultaneous predictors of residualized proactive and reactive RA, Interpersonal Manipulation and Anti-Social Behavior predicted residualized proactive RA; Erratic Lifestyle predicted residualized reactive RA.

In the present study, Machiavellianism predicted reactive but not proactive RA. The relationship between Machiavellianism and reactive relational aggression was consistent with previous research by Harrell (1980) and Pursoo (2013), both of whom found that Machiavellianism was positively related to reactive/retaliatory relational aggression. Reactive RA is more impulsive, usually done out of anger or retaliation, and has been shown to be more closely related to anger and hostility than is proactive relational aggression (Murray-Close et al., 2010). This retaliatory aggression and cynicism may contribute to a tendency for an individual high in Machiavellian traits to respond with reactive relational aggression in social settings. We expected that Machiavellianism would be related to proactive RA, but this hypothesis was not supported. This was unexpected given the manipulative and self-promotional tendencies of high MACHs (Bagozzi et al., 2013; Dussault et al., 2013) and the previous work of Pursoo (2013), who found that Machiavellianism predicted both proactive and reactive RA in an adolescent sample.

Additional research is needed to clarify the nature of the relationship between Machiavellianism and proactive relational aggression. Our findings could be sample-specific, could reflect measurement error, or meaningful difference between adolescents and emerging adults. It is possible that the measure of relational aggression used in the present study differs in meaningful ways from some of those used to assess these constructs in younger samples, partially accounting for the varying results. Perhaps there

are developmental differences such that adults who are high in Machiavellianism are more likely to utilize relational rather than overt aggression and that the form of aggression (i.e., overt vs. relational) is more important in this age range than the function (i.e., proactive vs. reactive). It must also be noted that much of the supportive evidence for predicting a relationship between Machiavellianism and proactive RA was extrapolated from the research findings linking dark personality constructs to overt proactive aggression. Overt and relational aggression might be sufficiently different that the distinction between them is more important than the proactive vs. reactive distinction within either category. That is, personality constructs could have different correlates with the expression of overt reactive/proactive aggression than with relational reactive/proactive aggression. Finally, another plausible explanation for this unexpected finding could involve impression management and the fact that Machiavellian traits may indicate a drive to protect one's reputation through protective self-monitoring (Rauthmann & Will, 2011). It is possible that the tendency for persons high in Machiavellian traits to feel driven to protect their reputation and engage in self-monitoring could contribute to an inaccurate representation of the amount of proactive relational aggression reported.

Limitations and Future Directions

One potential limitation of the present study concerns the reliance on self-report measures and their susceptibility to socially desirable responding. Relationally aggressive behaviors are socially undesirable, and participants may minimize their endorsement of these behaviors. The use of an anonymous online survey should have helped to reduce this possible bias (Joinson, 1999), and previous research has supported

the validity of assessing relational aggression via self-report (Green, Richardson, & Lago, 1996); however, it must still be acknowledged as a possible limitation. As previously mentioned, the influence of social desirability bias could have contributed to the lack of significant findings for the expected relationship between Machiavellianism and proactive RA. Past research indicates that social desirability is an issue in both self-report personality assessment inventories and in self-report aggressive behavior inventories (Arias & Beach, 1987; Backstrom & Bjorklund, 2013, 2014; Dyer, Bell, McCann, & Rauch, 2006; Saunders, 1991). In future studies of personality and relational aggression, it might be useful to explore methods for accounting for social desirability. For example, Backstrom and colleagues (2013) found that neutralizing the questions on a personality inventory was effective in lowering social desirability-biased responding. Additionally, administering a social desirability measure along with the other measures could have been beneficial in assessing the effect of this factor in the present study (Backstrom et al., 2013). Future research involving personality traits and relational aggression may be better served to take these factors into consideration by neutralizing questions on both personality inventories and measures of relational aggression, and by including a measure for social desirability.

Another possible limitation concerns the integrity of the data and the manner in which it may have been influenced by careless responding. The use of recommended procedures for identifying careless responders in online survey research (e.g., Huang et al., 2012; Meade & Craig, 2012) resulted in dropping approximately 110 participants due to a combination of careless responding and/or incomplete data. It is possible that we unintentionally retained some participants who responded carelessly and escaped

detection, and this could have negative implications for the validity of the conclusions from this study.

One clear limitation of the present study involves the gender distribution of the sample. Initially, we sought to achieve a sample that was 40% male and 60% female; however, this goal was not accomplished within the available timeline. This resulted in a sample that was predominantly female (75%), which limits generalizability to men and could have affected the ability of the present study to properly investigate gender differences and gender interaction effects. Similarly, the sample was collected from a single mid-sized southern university, which limits the degree to which findings can be generalized to a larger population of college students. For example, there may be regional differences in the expression of relational aggression, urban/rural differences, differences by the size of the student body at various colleges and universities, or racial/ethnic differences that would limit the generalizability of the present findings. Future research should focus on gathering more diverse samples to explore the generalizability of these findings and assess for potential cultural differences.

Given emerging evidence of the adverse correlates of both relational aggression and victimization among emerging adults (Dahlen et al., 2013; Linder et al., 2002; Miller & Lynam, 2003; Ostrov & Houston, 2008; Storch et al., 2003; Werner & Crick, 1999), research on this topic has great relevance. To date, most intervention efforts are aimed at school-aged children. Research on emerging adults exploring the correlates of reactive and proactive RA could be helpful in informing the development of preventive strategies and designing intervention programs for adult populations. For example, given that proactive relational aggression is driven by a desire to manipulate one's social standing

and has a goal-directed end, one may assume that an effective treatment for this type of RA would involve some form of social skills training (e.g., developing skills to utilize more acceptable and less harmful means of achieving social goals). However, given the relationship between relational aggression and the Dark Triad traits, which could indicate a certain level of social skill and interpersonal attunement, perhaps a better approach for adult interventions could involve elements such as empathy building and motivational enhancement.

The relationship between personality traits and relational aggression also carries implications for treatment in a clinical setting. If a client were presenting with any of the adverse correlates of RA (i.e., anxiety, stress, depression, self-harm, academic burnout, adjustment difficulties) more insight into the possibility of relational aggression and personality factors playing a role in perpetuating and maintaining these symptoms could better inform treatment. For example, insight could be gained into a client's social functioning by administering personality assessments and relational aggression measures. Specifically, low honesty-humility scores on the HEXACO could indicate that these particular personality factors are contributing to the engagement of RA, and that interventions focusing on developing traits such as tolerance and patience could be an effective addition into treatment involving any of the adverse correlates of RA and/or the treatment of relational aggression.

The present study assessed only peer directed proactive and reactive relationally aggressive behavior. Future research should involve exploration of the HEXACO and Dark Triad traits with other forms of RA (e.g., romantic relational aggression) and relational victimization. Further exploration of potential gender differences and gender

interactions could involve delving further into the HEXACO traits by looking at the domains at a facet level. Perhaps further work to map the distinct correlates of proactive RA and reactive RA, while considering the role of gender and other demographic variables, could be informative. For example, the inverse of the Gentleness facet on the Agreeableness domain could be more strongly related to RA than the Flexibility facet; the Sincerity facet on the Honesty-Humility domain could have an inverse relationship to proactive RA and not reactive RA. Given the gender difference findings in this study and the gender differences regarding personality and aggression that have been found in the past (e.g., Burton et al., 2007; Egan & Lewis, 2011; Hines & Saudino, 2008), more research is needed in this area to clarify these relationships and contributing factors.

The present study provided support for the utility of the HEXACO model of personality and Dark Triad constructs in predicting proactive and reactive relational aggression among emerging adults. In general, honesty-humility, agreeableness, pathological narcissism, and psychopathic traits are relevant to understanding relational aggression and appear to be worth pursuing in future research. Support for Machiavellianism was more mixed. The manner in which these variables predict relational aggression differs in some important ways depending on whether the focus is on proactive or reactive functions of relational aggression, lending further support to this distinction. Overall, the present study adds to the literature by providing further support for the relevance of personality traits in predicting relational aggression.

APPENDIX A
STUDY QUESTIONNAIRES

Participant Demographic Questionnaire

The following questions will be used to gather information about participants in this study. Please answer the questions accordingly.

Gender: ____ Male ____ Female ____ Other

Age: ____

Race/Ethnicity:

____ African American/Black

____ Caucasian/White

____ Hispanic/Latino

____ Native Hawaiian/Pacific Islander

____ American Indian/Alaska Native

____ Asian

____ Other (specify)

College Status:

____ Freshman

____ Sophomore

____ Junior

____ Senior

Self-Report Measure of Aggression and Social Behavior Measure

Directions: This questionnaire is designed to measure qualities of adult social interaction and close relationships. Please read each statement and indicate how true each is for you, **now**, and during the **last year**, using the scale below. Write

the appropriate number in the blank provided.

NOT AT ALL TRUE 1	2	3	SOMETIMES TRUE 4	5	6	VERY TRUE 7
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1. When someone hurts my feelings, I intentionally ignore them.

12345

67
2. When I am not invited to do something with a group of people, I will exclude people from future activities.

12345

67
3. When I have been angry at, or jealous of someone, I have tried to damage that person's reputation by gossiping about him/her or by passing on negative information about him/her to other people.

12345

67
4. When someone does something that makes me angry, I try to embarrass that person or make them look stupid in front of his/her friends.

12345

67
5. When I have been mad at a friend, I have flirted with his/her romantic partner.

12345

67
6. When I am mad at a person, I try to make sure s/he is excluded from group activities (going to the movies or to a bar).

12345

67
7. I have spread rumors about a person just to be mean.

12345

67
8. I have intentionally ignored a person until they gave me my way about something.

12345

67
9. My friends know that I will think less of them if they do not do what I want them to do.

12345

67

10. When I want something from a friend of mine, I act “cold” or indifferent towards them until I get what I want.

1 2 3 4 5
6 7

11. I have threatened to share private information about my friends with other people in order to get them to comply with my wishes.

1 2 3 4 5
6 7

MACH-IV

To what extent does each of the following statements accurately describe you? Please indicate the degree to which you personally agree or disagree with each of the following statements by choosing a number from the scale below that reflects your opinion.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5	4	3	2	1

1. Never tell anyone the real reason you did something unless it is useful to do so.

1 2 3 4 5

2. The best way to handle people is to tell them what they want to hear.

1 2 3 4 5

3. One should take action only when sure it is morally right.

1 2 3 4 5

4. Most people are basically good and kind.

1 2 3 4 5

5. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.

1 2 3 4 5

6. Honesty is the best policy in all cases.

1 2 3 4 5

7. There is no excuse for lying to someone else.

1 2 3 4 5

8. Generally speaking, people won't work hard unless they're forced to do so.

1 2 3 4 5

9. All in all, it is better to be humble and honest than to be important and dishonest.

- | | | | | | |
|-----|--|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 10. | When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which carry more weight. | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 11. | Most people who get ahead in the world lead clean, moral lives. | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 12. | Anyone who completely trusts anyone else is asking for trouble. | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 13. | The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught. | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 14. | Most people are brave. | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 15. | It is wise to flatter important people. | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 16. | It is possible to be good in all respects. | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 17. | P.T. Barnum was wrong when he said that there's a sucker born every minute. | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 18. | It is hard to get ahead without cutting corners here and there. | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 19. | People suffering from incurable diseases should have the choice of being put painlessly to death. | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| 20. | Most people forget more easily the death of their parents than the loss of their property. | | | | |
| | 1 | 2 | 3 | 4 | 5 |

Pathological Narcissism Inventory

Instructions: Below you will find 52 descriptive statements. Please consider each one and indicate how well that statement describes you. Please respond to all statements. There are no right or wrong answers. On your answer sheet, fill in only one answer. Simply indicate how well each statement describes you as a person using the following scale:

0	1	2	3	4	5
Not at all	Moderately	A little	A little	Moderately	Very much
Like me	Unlike me	Unlike me	Like me	Like me	Like me

1. I often fantasize about being admired and respected.
2. My self-esteem fluctuates a lot.
3. I sometimes feel ashamed about my expectations of others when they disappoint me.
4. I can usually talk my way out of anything.
5. It's hard to feel good about myself when I'm alone.
6. I can make myself feel good by caring for others.
7. I hate asking for help.
8. When people don't notice me, I start to feel bad about myself.
9. I often hide my needs for fear that others will see me as needy and dependent.
10. I can make anyone believe anything I want them to.
11. I get mad when people don't notice all that I do for them.
12. I get annoyed by people who are not interested in what I say or do.
13. I wouldn't disclose all my intimate thoughts and feelings to someone I didn't admire.
14. I often fantasize about having a huge impact on the world around me.
15. I find it easy to manipulate people.
16. When others don't notice me, I start to feel worthless.
17. Sometimes I avoid people because I'm concerned that they'll disappoint me.
18. I typically get very angry when I'm unable to get what I want from others.
19. I sometimes need important others in my life to reassure me of my self-worth.
20. When I do things for other people, I expect them to do things for me.
21. When others don't meet my expectations, I often feel ashamed about what I wanted.
22. I feel important when others rely on me.
23. I can read people like a book.
24. When others disappoint me, I often get angry at myself.
25. Sacrificing for others makes me the better person.
26. I often fantasize about accomplishing things that are probably beyond my means.
27. Sometimes I avoid people because I'm afraid they won't do what I want them to.

28. It's hard to show others the weaknesses I feel inside.
29. I get angry when criticized.
30. It's hard to feel good about myself unless I know other people admire me.
31. I often fantasize about being rewarded for my efforts.
32. I am preoccupied with thoughts and concerns that most people are not interested in me.
33. I like to have friends who rely on me because it makes me feel important.
34. Sometimes I avoid people because I'm concerned they won't acknowledge what I do for them.
35. Everybody likes to hear my stories.
36. It's hard for me to feel good about myself unless I know other people like me.
37. It irritates me when people don't notice how good a person I am.
38. I will never be satisfied until I get all that I deserve.
39. I try to show what a good person I am through my sacrifices.
40. I am disappointed when people don't notice me.
41. I often find myself envying others' accomplishments.
42. I often fantasize about performing heroic deeds.
43. I help others in order to prove I'm a good person.
44. It's important to show people I can do it on my own, even if I have some doubts inside.
45. I often fantasize about being recognized for my accomplishments.
46. I can't stand relying on other people because it makes me feel weak.
47. When others don't respond to me the way that I would like them to, it is hard for me to still feel ok with myself.
48. I need others to acknowledge me.
49. I want to amount to something in the eyes of the world.
50. When others get a glimpse of my needs, I feel anxious and ashamed.
51. Sometimes it's easier to be alone than to face not getting everything I want from other people.

52. I can get pretty angry when others disagree with me.

Narcissistic Personality Inventory

For each pair of items, choose the one that you most identify with. If you identify with both equally choose which one you think is most important.

1. I have a natural talent for influencing people. OR
I am not good at influencing people.
2. Modesty doesn't become me. OR
I am essentially a modest person.
3. I would do almost anything on a dare. OR
I tend to be a fairly cautious person.
4. When people compliment me I sometimes get embarrassed. OR
I know that I am good because everybody keeps telling me so.
5. The thought of ruling the world frightens the hell out of me. OR
If I ruled the world it would be a better place.
6. I can usually talk my way out of anything. OR
I try to accept the consequences of my behavior.
7. I prefer to blend in with the crowd. OR
I like to be the center of attention.
8. I will be a success. OR
I am not too concerned about success.
9. I am no better or worse than most people. OR
I think I am a special person.
10. I am not sure if I would make a good leader. OR
I see myself as a good leader.
11. I am assertive. OR
I wish I were more assertive.
12. I like to have authority over other people. OR
I don't mind following orders.
13. I find it easy to manipulate people. OR
I don't like it when I find myself manipulating people.

14. I insist upon getting the respect that is due me. OR
I usually get the respect that I deserve.
15. I don't particularly like to show off my body. OR
I like to show off my body.
16. I can read people like a book. OR
People are sometimes hard to understand.
17. If I feel competent I am willing to take responsibility for making decisions. OR
I like to take responsibility for making decisions.
18. I just want to be reasonably happy. OR
I want to amount to something in the eyes of the world.
19. My body is nothing special. OR
I like to look at my body.
20. I try not to be a show off. OR
I will usually show off if I get the chance.
21. I always know what I am doing. OR
Sometimes I am not sure of what I am doing.
22. I sometimes depend on people to get things done. OR
I rarely depend on anyone else to get things done.
23. Sometimes I tell good stories. OR
Everybody likes to hear my stories.
24. I expect a great deal from other people. OR
I like to do things for other people.
25. I will never be satisfied until I get all that I deserve. OR
I take my satisfactions as they come.
26. Compliments embarrass me. OR
I like to be complimented.
27. I have a strong will to power. OR
Power for its own sake doesn't interest me.
28. I don't care about new fads and fashions. OR
I like to start new fads and fashions.
29. I like to look at myself in the mirror. OR

I am not particularly interested in looking at myself in the mirror.

30. I really like to be the center of attention. OR
It makes me uncomfortable to be the center of attention.
31. I can live my life in any way I want to. OR
People can't always live their lives in terms of what they want.
32. Being an authority doesn't mean that much to me. OR
People always seem to recognize my authority.
33. I would prefer to be a leader. OR
It makes little difference to me whether I am a leader or not.
34. I am going to be a great person. OR
I hope I am going to be successful.
35. People sometimes believe what I tell them. OR
I can make anybody believe anything I want them to.
36. I am a born leader. OR
Leadership is a quality that takes a long time to develop.
37. I wish somebody would someday write my biography. OR
I don't like people to pry into my life for any reason.
38. I get upset when people don't notice how I look when I go out in public. OR
I don't mind blending into the crowd when I go out in public.
39. I am more capable than other people. OR
There is a lot that I can learn from other people.
40. I am much like everybody else. OR
I am an extraordinary person.

Self-Report of Psychopathy Scale-III

Please rate the degree to which you agree with the following statements about you. You can be honest because your name will be detached from the answers as soon as they are submitted.

1	2	3	4	5
Strongly	Disagree	Neutral	Agree	Agree
Disagree				Strongly

1. I'm a rebellious person.
2. I'm more tough-minded than other people.
3. I think I could "beat" a lie detector.
4. I have taken illegal drugs (e.g., marijuana, ecstasy).
5. I have never been involved in delinquent gang activity.
6. I have never stolen a truck, car or motorcycle.
7. Most people are wimps.
8. I purposely flatter people to get them on my side.
9. I've often done something dangerous just for the thrill of it.
10. I have tricked someone into giving me money.
11. It tortures me to see an injured animal.
12. I have assaulted a law enforcement official or social worker.
13. I have pretended to be someone else in order to get something.
14. I always plan out my weekly activities.
15. I like to see fist-fights.
16. I'm not tricky or sly.
17. I'd be good at a dangerous job because I make fast decisions.
18. I have never tried to force someone to have sex.
19. My friends would say that I am a warm person.
20. I would get a kick out of 'scamming' someone.
21. I have never attacked someone with the idea of injuring them.
22. I never miss appointments.
23. I avoid horror movies.
24. I trust other people to be honest.
25. I hate high speed driving.
26. I feel so sorry when I see a homeless person.
27. It's fun to see how far you can push people before they get upset.
28. I enjoy doing wild things.
29. I have broken into a building or vehicle in order to steal something or vandalize.
30. I don't bother to keep in touch with my family any more.
31. I find it difficult to manipulate people.

32. I rarely follow the rules.
33. I never cry at movies.
34. I have never been arrested.
35. You should take advantage of other people before they do it to you.
36. I don't enjoy gambling for real money.
37. People sometimes say that I'm cold-hearted.
38. People can usually tell if I am lying.
39. I like to have sex with people I barely know.
40. I love violent sports and movies.
41. Sometimes you have to pretend you like people to get something out of them.
42. I am an impulsive person.
43. I have taken hard drugs (e.g., heroin, cocaine).
44. I'm a soft-hearted person.
45. I can talk people into anything.
46. I never shoplifted from a store.
47. I don't enjoy taking risks.
48. People are too sensitive when I tell them the truth about themselves.
49. I was convicted of a serious crime.
50. Most people tell lies everyday.
51. I keep getting in trouble for the same things over and over.
52. Every now and then I carry a weapon (knife or gun) for protection.
53. People cry way too much at funerals.
54. You can get what you want by telling people what they want to hear.
55. I easily get bored.
56. I never feel guilty over hurting others.
57. I have threatened people into giving me money, clothes, or makeup.
58. A lot of people are "suckers" and can easily be fooled.
59. I admit that I often "mouth off" without thinking.
60. I sometimes dump friends that I don't need any more.
61. I would never step on others to get what I want.
62. I have close friends who served time in prison.

63. I purposely tried to hit someone with the vehicle I was driving.

64. I have violated my parole from prison.

HEXACO-60

On the following pages you will find a series of statements about you. Please read each statement and decide how much you agree or disagree with that statement. Then write your response in the space next to the statement using the following scale:

5 = strongly agree

4 = agree

3 = neutral (neither agree nor disagree)

2 = disagree

1 = strongly disagree

Please answer every statement, even if you are not completely sure of your response.

1. I would be quite bored by a visit to an art gallery.
2. I plan ahead and organize things, to avoid scrambling at the last minute.
3. I rarely hold a grudge, even against people who have badly wronged me.
4. I feel reasonably satisfied with myself overall.
5. I would feel afraid if I had to travel in bad weather conditions.
6. I wouldn't use flattery to get a raise or promotion at work, even if it would succeed.
7. I'm interested in learning about the history and politics of other countries.
8. I often push myself very hard when trying to achieve a goal.
9. People sometimes tell me that I am too critical of others.
10. I rarely express my opinions in group meetings.
11. I sometimes can't help worrying about little things.
12. If I knew that I could never get caught, I would be willing to steal a million dollars.
13. I would enjoy creating a work of art, such as a novel, a song, or a painting.
14. When working on something, I don't pay much attention to small details.
15. People sometimes tell me that I'm too stubborn.
16. I prefer jobs that involve active social interaction to those that involve working alone.
17. When I suffer from a painful experience, I need someone to make me comfortable.
18. Having a lot of money is not especially important to me.

19. I think that paying attention to radical ideas is a waste of time.
20. I make decisions based on the feeling of the moment rather than on careful thought.
21. People think of me as someone who has a quick temper.
22. On most days, I feel cheerful and optimistic.
23. I feel like crying when I see other people crying.
24. I think that I am entitled to more respect than the average person is.
25. If I had the opportunity, I would like to attend a classical music concert.
26. When working, I sometimes have difficulties due to being disorganized.
27. My attitude toward people who have treated me badly is “forgive and forget”.
28. I feel that I am an unpopular person.
29. When it comes to physical danger, I am very fearful.
30. If I want something from someone, I will laugh at that person's worst jokes.
31. I've never really enjoyed looking through an encyclopedia.
32. I do only the minimum amount of work needed to get by.
33. I tend to be lenient in judging other people.
34. In social situations, I'm usually the one who makes the first move.
35. I worry a lot less than most people do.
36. I would never accept a bribe, even if it were very large.
37. People have often told me that I have a good imagination.
38. I always try to be accurate in my work, even at the expense of time.
39. I am usually quite flexible in my opinions when people disagree with me.
40. The first thing that I always do in a new place is to make friends.
41. I can handle difficult situations without needing emotional support from anyone else.
42. I would get a lot of pleasure from owning expensive luxury goods.
43. I like people who have unconventional views.
44. I make a lot of mistakes because I don't think before I act.
45. Most people tend to get angry more quickly than I do.
46. Most people are more upbeat and dynamic than I generally am.

- 47. I feel strong emotions when someone close to me is going away for a long time.
- 48. I want people to know that I am an important person of high status.
- 49. I don't think of myself as the artistic or creative type.
- 50. People often call me a perfectionist.
- 51. Even when people make a lot of mistakes, I rarely say anything negative.
- 52. I sometimes feel that I am a worthless person.
- 53. Even in an emergency I wouldn't feel like panicking.
- 54. I wouldn't pretend to like someone just to get that person to do favors for me.
- 55. I find it boring to discuss philosophy.
- 56. I prefer to do whatever comes to mind, rather than stick to a plan.
- 57. When people tell me that I'm wrong, my first reaction is to argue with them.
- 58. When I'm in a group of people, I'm often the one who speaks on behalf of the group.
- 59. I remain unemotional even in situations where most people get very sentimental.
- 60. I'd be tempted to use counterfeit money, if I were sure I could get away with it.

APPENDIX B

CONSENT FORM

THE UNIVERSITY OF SOUTHERN MISSISSIPPI AUTHORIZATION TO PARTICIPATE IN RESEARCH PROJECT

Consent is hereby given to participate in the study titled: Personality, Self-Concept, and Social Behavior

1. **Description of Study:** The purpose of this study is to assess how various aspects of personality and self-concept relate to the social behavior of college students. Participants will be asked to complete online questionnaires about aspects of their personality, self-concept, and forms of social aggression in which they have participated or experienced. The study is fully online, will take no more than 60 minutes to complete, and will be worth 1 research credit.
2. **Benefits:** Although participants will receive no direct benefit from participation in this study, the information provided will enable researchers to better understand the possible role of personality and self-concept in social behavior.
3. **Risks:** There are no foreseeable risks to participating in this study. If you feel that completing these questionnaires has resulted in emotional distress, please stop and notify the researcher (Niki Knight at Niki.Knight@eagles.usm.edu). If you should decide at a later date that you would like to discuss your concerns, please contact the research supervisor, Dr. Eric Dahlen (Eric.Dahlen@usm.edu).
4. **Confidentiality:** These questionnaires are intended to be anonymous, and your name is requested only for the purpose of assigning research credit. The information you provide will be kept confidential, and your name will not be associated with your responses. Records related to this study will be stored on secure computer devices, and only involved researchers will have access to these records. If significant new information relating to this study becomes known which may relate to your willingness to continue to take part in this study, you will be given this information.
5. **Voluntary Nature of the Study:** Participation in this study is completely voluntary. You may exit the study at any time or skip any questions that you do not feel comfortable answering. Your decision whether to participate in the study or not will not affect your current or future relationship with the University of Southern Mississippi.
6. **Participant's Assurance:** Whereas no assurance can be made concerning results that may be obtained (since results from investigational studies

cannot be predicted), the researcher will take every precaution consistent with the best scientific practice. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits. Questions concerning the research should be directed to Niki Knight (Niki.Knight@eagles.usm.edu). This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820. A copy of this form can be printed from your computer.

7. **Consent to Participate:** I consent to participate in this study, and in agreeing to do so, I understand that:
- a. I must be at least 18 years of age;
 - b. I am being asked to complete a set of questionnaires which will take no more than 60 minutes and for which I will receive 1 research credit; and
 - c. All information I provide will be used for research purposes and be kept confidential.

I have read and understand the information stated, am at least 18 years of age, and I willingly sign this consent form. A copy can be printed from my browser window.

Signature of the Research Participant

Date

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